Listing of Claims:

The following list of claims shall replace all previous versions.

1. (Previously presented) An *in vivo* method of identifying a compound that modulates a transcriptional response to hypoxia, said method comprising:
contacting a cell, or the extracellular environment of a cell, with a candidate compound;
subjecting the cell to hypoxic conditions; and
assessing a transcriptional response of the cell to the hypoxic conditions, wherein an increase or decrease in the transcriptional response to hypoxia in the cell in the presence of the candidate compound compared to the transcriptional response to hypoxia in a cell in the absence of the candidate compound indicates that the candidate compound modulates the transcriptional response to hypoxia.

2. (Previously Presented) The method of claim 1, wherein the transcriptional response is expression of a reporter gene under the control of a hypoxia-responsive promoter or an endogenous hypoxia-responsive gene.

3. (Previously Presented) The method of claim 2, wherein the reporter gene encodes luciferase, green fluorescent protein, yellow fluorescent protein, or cyano-fluorescent protein.

4. (Previously Presented) The method of claim 2, wherein the endogenous gene encodes vascular endothelial growth factor, erythropoietin, heme oxygenase, inducible nitric oxide synthase (iNOS), glucose transporter 1, glucose transporter 3, hexokinase, aldolase A (ALDA), or transferrin.

5. (Canceled).

6. (Previously Presented) The method of claim 1, wherein the cell is in a mammal.

7. (Currently amended) The method of claim 1, wherein the hypoxic conditions to which the cells are exposed <u>are</u> induced by deferoxamine or cobalt chloride.

8-24. (Cancelled).

25. (Previously Presented) The method of claim 1, wherein said candidate compound is a peptide.

26-31. (Canceled).

32. (Previously presented) The method of claim 1, wherein said candidate compound is a small molecule.